

# Parvati Jayakumar

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## EDUCATION

### University of Washington, Seattle

Sep 2023 - Mar 2025

Master of Science in Data Science

GPA: 3.94/4

- Probability & Statistics, Applied Statistics, Machine Learning, Data Visualization, Database Management

### Indian Institute of Information Technology Dharwad

Aug 2018 - Aug 2022

Bachelor of Technology in Electronics and Communication Engineering

GPA: 4/4

- Institute Gold Medal and Department Gold Medal for Academic Excellence

## EXPERIENCE

### Graduate Research Assistant

Sep 2024 - Mar 2025

UW Scientific Software Engineering Center, eScience Institute

Seattle, WA

- Integrated DeepEval into the **OLMo2 RAG pipeline**, achieving a test score rating of **8.3/10**, ensuring reliability of search results in support of Vera C. Rubin Observatory research.
- Engineered a fully automated financial disclosure system using **Apps Script** and **Power Automate**, processing 100% of disclosures within 24 hours for the UW Office of Research team.
- Pioneered the user interface development of a **Flutter app** for the Post-Disaster Communications project, enabling field teams to achieve **80%+** faster data transmission speeds during emergencies.

### Data Science Intern

Jun 2024 - Sep 2024

Pearson Packaging Systems

Spokane, WA

- Engineered a Power BI dashboard for the Inventory Department that enabled reporting; improved on-time delivery rates to **95%** exceeding company targets and cut material costs by **50%**.
- Spearheaded the **Data Warehouse** pilot project, establishing a functional instance and creating a detailed **Microsoft Fabric** implementation plan that aims to reduce potential deployment delays by **17%**.

### Data Scientist (R&D)

Nov 2021 - Jun 2023

MiiCare

Remote (London, UK)

- Developed and maintained streamlined reports on **health data for 300+** seniors and disabled individuals, enabling rapid, data-driven assessments for early detection of critical mental and physical health concerns.
- Led the development of MiiVoice, a voice-based mental health prediction system using **speech processing** and contributed to **NLP projects**, increasing customer engagement by **29%** (2021 Dec - 2023 Jun).
- Developed a ML model to classify **Acoustic Gait patterns** using footstep sounds and achieved  $\leq 0.71\%$  relative error compared to IMU and video-based systems (tested on 10 users). ([BSN 2023](#)), ([arXiv](#)).

## PROJECTS

### InsurIQ: Health Insurance Analytics & RAG Dashboard

Feb 2025 - (Present)

GitHub-reference (Personal Project)

Python, Data Analytics, NLP

- Design an interactive panel-based dashboard to visualize **health insurance data** using **RAG**, enabling analysts to process **45+** insurance PDF documents quicker and extract key insights for risk assessment.

### Biomarker Analysis in VAP Patients

Jan 2025 - Mar 2025

GitHub-reference (Masters Capstone Project)

Python, Statistics, ML

- Implemented a **LCA clustering algorithm** to analyze biomarker expression patterns in VAP patients, categorizing **466** individuals into distinct risk groups for targeted intervention strategies.

## SKILLS

**Python**(Pandas, NumPy, Matplotlib, Plotly, Seaborn, scikit-learn, TensorFlow, PyTorch), R, **SQL**, MATLAB, C/C++, **Power BI**, Tableau, SQLite, MySQL, PostgreSQL, Qdrant, MongoDB, SQL Server, Microsoft Fabric, **Azure** (Data Warehousing components, Machine Learning), **AWS**, **Git**, FastAPI, Streamlit, Docker, Kubernetes, **Agile** methodology, Data Analysis, Data Science, Data Engineering, Natural Language Processing, Machine Learning